MOVING IN AND MOVING UP:
LABOR MARKETS DYNAMICS OF WOMEN AND MEN IN EL SALVADOR

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ABSTRACT

We use individual and household level panel data to study labor market dynamics with a focus on what factors help men and women to achieve advantageous jobs in the labor market and whether those factors differ between men and women. Specifically, we examine the influence of personal characteristics (such as education), family characteristics (such as the number of children), and job characteristics (such as the industry sector of employment) in determining whether a women (or man) moves up into an advantageous labor market state from an unfavorable state.. We consider three labor market states to be "advantageous" ("*favorable*" in Spanish): (1) formal salaried employees, (2) non-agricultural self-employed workers and employers with a decent wage (defined as reported labor earnings above the legal minimum wage) and (3) agricultural self-employed workers or employers with a decent wage. We examine the transitions into and out of these advantageous labor market states and other labor market and non-labor market states including informal salaried employment, unfavorable non-agricultural self-employment, unfavorable agricultural self-employment, unemployment and out of the labor force (distinguishing between those going to school, those engaged in unpaid domestic work, and all other non-labor force activity).

Our work sheds light on the answers to two key questions: (1) what are the characteristics of the men and women who move up to an advantageous labor market state from an unfavorable one? and (2) what are the characteristics of the men and women who fall out of an advantageous labor market states into unfavorable ones? The answers to these questions contribute to the appropriate design and targeting of public policy interventions to promote success in the labor market. Our work also sheds light on whether the characteristics correlated with success in the labor market differ between women and men, and therefore whether the appropriate design and targeting of policies is different for men and women. Our findings suggest that education is the most important personal characteristic promoting transitions into non-agricultural advantageous labor market states and reducing transitions from advantageous labor market states. In particular, a tertiary (post-secondary) education is a strong predictor of whether a man or women is found in, and stays in, the most advantageous labor market state, formal salaried employment. Along with a tertiary education, a secondary education also promotes advantageous non-agricultural self-employment. For women, dependent children or elderly members in a household reduces the probability of a transition into an advantageous labor market state. This is likely because unpaid domestic care is still largely the responsibility of women in El Salvador (especially for a wife/spouse, grandmother or oldest daughter). This suggests that a key policy intervention to promote advantageous employment for women would be to make it easier and cheaper to care for children outside of the home while women are working.

1. Introduction

Economic empowerment of women, defined as the "capacity to participate in, contribute to and benefit from growth processes in ways that recognize the value of their contributions, respect their dignity and make it possible to negotiate a fairer distribution of the benefits of growth" (OECD, 2011). In the context of this paper, we consider economic empowerment occur when women are employed in jobs which provide them with a good salary and/or the possibility of improving their economic status. In our research we study the job, personal and institutional characteristics that promote the entry of men and women into the labor force and the ability of women to obtain better jobs once they enter. In particular, the focus of our research is an examination of the characteristics of women who become empowered and successful in the labor market.

From the Fourth World Conference on Women held in China in September 1995, El Salvador undertook an action platform for addressing efforts to combat discrimination against women. Thus, in 1996, was issued the National Policy on Women the Institute for the Development of Women (ISDEMU) was founded. The Salvadoran government in its Government Plan (2010-2014) established that gender inequality is one of the most important challenges to overcome. Following a qualitative evaluation, changes were introduced in the National Policy on Women, so that, thereafter, its main goal is "to deconstruct the cultural patterns of gender inequality and to give incentives to build the knowledge that helps create transformative interventions that have a significant impact on the lives of women". Thus the efforts of the National Institute for the Development of Women (ISDEMU) were redirected and, in 2011, the Equality and Elimination of Discrimination Against Women Act was passed in order to strengthen its institutional framework. This law determines that ISDEMU is responsible for developing activities, such as training, technical assistance, technology transfer, tax incentives, access to soft loans, marketing opportunities and to promote competitiveness, in in order to empower women; it is also responsible for providing incentives to credit institutions to create special entrepreneurship programs for women (art. 24).

For these programs to be effective at reducing poverty and improving the participation of women in the process of economic growth, it is important that those designing and running these programs know the characteristics of the women who could benefit from the programs, as well as the sectors of the economy where self-employed women or women who are employers in small firms are most likely to be successful. Many have argued that self-employment in developing countries is not an indicator of economic empowerment, but rather that workers in developing countries become self-employed because they are rationed out of formal sector jobs (Fields, 1975; Tokman, 2007, de Mel, et al, 2010). On the other hand, some point to other self-employed who are innovative and, successful entrepreneurs (de Soto, 1989; Bennet and Estrin, 2007). In our study of whether the labor market has contributed to the inclusion of women in the benefits of growth, it is important to distinguish "successful," "favorable" or "advantageous" self-employment and small-scale entrepreneurship, which can promote the inclusion of women in

the benefits of development, from self-employment that exists only because women cannot find the jobs they want in the formal sector. We consider three labor market states to be "advantageous" ("favorable" in Spanish): (1) formal salaried employees, (2) non-agricultural self-employed workers and employers with a decent income, defined as reported labor earnings above the legal minimum wage or (in the appendix) a household income above the poverty line, and (3) agricultural self-employed workers or employer with a decent income. We believe that these states are advantageous because they contribute to meeting basic needs of workers and their households, while providing them with the ability to respond to adverse situations and in the case of women contribute to the process of economic empowerment.

Our definition of "advantageous" labor market states is similar to the International Labor Office (ILO) concept of "decent work." Two key components of the ILO concept of "decent work" are remunerative employment and social security (Ghai, 2003). "Social security serves to meet people's urgent subsistence needs and to provide protection against contingencies, and as such is an important aspect of decent work" (Ghia, 2003, p.122). Our first advantageous labor market state is formal salaried employment, defined as paid employment where workers are insured by social security. Remunerative employment is work that pays sufficiently to allow a worker's family to live at an adequate level. "For developing countries, a good indicator of remunerative work is provided by data on absolute poverty" (Ghia, 2003, p. 119). The ILO suggests that a good indicator of whether workers do not have remunerative employment: the first defines advantageous self-employment as those whose labor earnings are above the legal minimum wage, the second (in the appendix) defines advantageous self- employment as those who live in a household with an income above the poverty line. We do not use the term "decent work" in this paper because our measure of advantageous labor market states does not take into account other components that the ILO considers when defining decent work, such as basic worker rights and social dialogue (i.e. access to collective bargaining).

Our study sheds light on the answers to two key questions: (1) what are the characteristics of the men and women who move up to an advantageous labor market state from an unfavorable one? and (2) what are the characteristics of the men and women who fall out of an advantageous labor market states into unfavorable ones? The answers to these questions contribute to the appropriate design and targeting of public policy interventions to promote success in the labor market. Our work also sheds light on whether the characteristics correlated with success differ between women and men, and therefore whether the appropriate design and targeting of policies is different for men and women. Along with the qualitative study of female employees and self- employed workers, this paper will inform the debate on the following questions: (1) What public policies would support the ability of women to benefit from growth? (2) What is the role of formal wage and salaried employment and small-scale entrepreneurship in supporting the ability of women to benefit from economic growth? and, (3) What public policies would best support the ability of women to become successful formal sector employees or successful small-scale entrepreneurs?

In the empirical work presented in this paper we use panel data to study the determinants of job mobility for women into and out of the labor force (distinguishing between those going to school, those engaged in unpaid domestic work and those in other non-labor market states), into and out of unemployment, and into and out of formal salaried employment,1 informal salaried employment, self-employment, and employer/owner. We also conduct a similar analysis for men and compare whether the determinants of job mobility differ between men and women in El Salvador. We extend the existing literature on labor market mobility in Latin America by separating self-employment into "advantageous" and "unfavorable".

We focus our study on what factors help women to achieve advantageous jobs in the labor market. Specifically, we examine the influence of personal characteristics (such as education), family characteristics (such as the number of children), and job characteristics (such as the industry sector of employment) in determining whether a women (or man) moves up into an advantageous labor market state from an unfavorable state. Because we have panel data on individuals, we will also be able to pay particular attention to the timing of the transition process. For example, Cunningham and Bustos Sakvagno (2011) suggest that many successful self-employed workers and entrepreneurs first spend a short time as informal sector employees acquiring job- relevant skills, and then move on to formal jobs or return to school, and only then start their own small businesses. Even then, they may spend short periods of time in informal wage paying jobs or more education on their way to long-term successful employment states. This suggests that to understand what makes a woman successful in the labor market and as a small-scale entrepreneur it is important to simultaneously study the movement of women between formal employment, informal employment, advantageous self-employment, education and other non-employment states. For example, if informal or formal employment is an important stepping stone to becoming a successful entrepreneur, then public policies to promote entrepreneurship might actually need to promote wage and salaried employment for those workers (at least when they first enter the labor force), rather than enact policies that encourage women to move directly from non-employment to self-employment or ownership of small-scale firms. This type of study can only be done with panel data that follows individuals over time. Firm level enterprise surveys, which follow enterprises (and not people) over time, would not allow the researcher to examine these transitions between informal employment, formal employment, schooling, unpaid domestic work and self- employment.

We find that in El Salvador men are more mobile than women; over 22% of men change states from one year to the next, compared to only 12% of women. We find substantial mobility of both men and women between self-employment and the informal sector. For women (but not men) there is also substantial mobility between the labor market and unpaid domestic care. There is substantially less mobility out of (and especially into) formal salaried employment than in any other sector, for both men and women.

[1] Originally we had separated part-time and full-time salaried formal employment. However, we found that the few part-time salaried formal employees had earnings and other characteristics similar to full-time salaried employees and so decided to combine part-time and full-time into one salaried formal sector.

For both men and women, the most important characteristic promoting transitions into advantageous labor market states is education. Any additional education will increase the probability of transitioning into the salaried formal sector, although tertiary education is the most advantageous for the salaried formal sector while a secondary education is most advantageous for advantageous non-agricultural self-employment. Our results suggest that, compared to women, education has a bigger impact on the ability of men to transition into advantageous labor market states. This suggests that educated women may face a "penalty" in searching for advantageous employment.

Very young workers are not likely to transition into advantageous non-agricultural self-employment. It is most likely that a worker transitions into advantageous non-agricultural self-employment in their 30s or 40s. This suggests that workers most likely to be successful in self-employment obtain experience before becoming self-employed.

Remittances and other non-labor income promote advantageous non- agricultural self-employment. Receiving more remittances and other non-labor income increases the probability of transitioning into advantageous non-agricultural self- employment and decreases the probability of transitioning out of this advantageous state. This is true for both men and women. For men, receiving more remittances and other non-labor income decreases the probability of transitioning into formal sector employment. In general, our results suggest that receiving more remittances decreases the probability of transitioning into formal sector employment but increases the probability of transitioning into advantageous self-employment. For women, an increase in remittances and other non-labor income also increases the probability of leaving the labor force for unpaid domestic care or other types of non-labor activity.

Access to electricity and other public services increases the probability that both men and women transition from an unfavorable state into advantageous non-agricultural self-employment. This suggests that policies of providing access to public services to poor families can also be thought of as policies to promote advantageous self-employment.

Female spouses are less likely to be salaried formal employees compared to other sectors, while male spouses are more likely to be in salaried formal employment. A higher number of dependent members in the household (i.e. too young or too old to work) make it less likely that women (but not men) are found in the salaried formal sector. A higher number of dependent children (7-19 years old) also reduce the probability that women (but not men) transition into formal salaried employment. The difference between men and women is likely a consequence of the traditional expectation that wives will provide unpaid domestic care to children and other dependents, while husbands are expected to have full-time jobs outside of the home. Surprisingly, the number of dependent family members does not have a significant influence on the probability that women will transition into advantageous non- agricultural self-employment. This may be because women are attracted to self-employment for the flexibility it offers.

The next section of this paper describes the panel data used in this paper. Section 3 describes and compares the labor market characteristics of men and women in the Salvadoran labor market and how these characteristics differ between men and women. In this section we use multinomial logit analysis to identify the personal and job characteristics of men and women in each of the 11 labor market states, and how those characteristics differ between men and women. Section 4 uses the panel nature of our data to measure the degree to which men and women move from unfavorable states to advantageous labor market states, and vice-versa, from one year to the next. Finally, section 5 identifies the characteristics that determine whether or not men and women transition into or out of successful labor market states. Section 6 concludes and presents policy recommendations.

2. Data

To study the labor markets dynamics of women and men in El Salvador, we created an annual panel data set using the Multipurpose Household Surveys (EHPM) from the years 2008-2012. These survey data have been collected by the General Directorate of Statistics and Census (DIGESTYC) since 1975, although we only use the surveys from 2008 to 2012 because it is only in those years that the necessary variables are available to allow us to match individuals across surveys.

The EHPM includes information related to social, economic and demographic aspects of households, aimed for diagnosis, planning and evaluation purposes of the country. In addition, the survey contains the most comprehensive household's information for both the rural and urban areas of the country. This data set allows us to follow women and men as they change jobs or as the job characteristics change.

The EHPM is based on a census mapping technique, developed by DIGESTYC. Every five years, DIGESTYC updates and renews the sampling frame of households. During a five year period, the sample is created in a single rotating base from the same sampling framework. The base census map divides the territory into basic units called "segments", consisting of one or more blocks (each block with a group of 12-16 households) and there is a specific unique number for each segment. Some segments are kept and others are partially rotated every year to reduce the non-response bias over time.

The division of segments allowed us to create the panel data for the years 2008-2012. The total sample contains 407,737 observations – 194,508 males (47.7 percent) and 213,229 females (52.3 percent). However, our analysis is restricted to the working age population, therefore, 266,546 observations – 122,403 males (45.9 percent) and 144,143 females (54 percent). From this sample, 165,360 belong to the economically active population – 101,089 males (61.1 percent) and 64,271 females (38.9 percent).

To create the panel data we matched households, then household heads, and finally all the

members of the household. This methodology considers key variables such as the segment number, geographical location, year of birth, gender and age of each individual to create a unique identifier that allows a matching process of the head of household and the members living in the household for each home. We are able to match the same individuals across two consecutive years, but cannot follow the same individuals for more than two years. Thus, our data effectively consists of four panel data sets, each of which follows households and individuals for two years (2008-2009, 2009-2010, 2010-2011 and 2011-2012).

On average, 23 percent of the EHPM observations were repeated the following year. Between 2008 and 2009, observations were repeated for 22.6 percent of the 2008 survey sample; from 2009 and 2010, 21.6 percent; for the 2010 and 2011 period, 23.9 percent; and finally, between 2011 and 2012, 23.9 percent as well. The percentages for women are as follows, 22.4 percent from the period 2008 and 2009; 21.6 percent, between 2009 and 2010; 23.7 between 2010 and 2011, and finally 24.1 percent between 2011 and 2012. These results are shown in the appendix A (Table A1).

In order to check the representativeness of the panel data sample, we compared some basic characteristics of the panel data with the full cross-sectional data set (Table 1). The distribution of workers by gender, region of the country, economic activity and the distribution by employment status are all similar in the panel and full data.

3. Women in the El Salvador labor market

3.1. Background

The labor market in El Salvador is characterized by a high overall labor force participation rate for men, an unemployment rate of 6.6 percent on average for the period of 2008-2012 and low level of formal sector employment in general (Table 1). According to the World Bank statistics, El Salvador had the lowest economic growth among Central American countries during the period that we study (2008-2012). Remittances from relatives living abroad represent one sixth of the country's GDP, and they continue to show increasing trend overtime.

Economic growth plays a pivotal role in the creation of more jobs in El Salvador; as economic growth increases, unemployment declines. In El Salvador, economic growth shows a high correlation with job creation rates. Figure 1 shows the trends of unemployment vs. economic growth for the years being examined. Figure 1 is consistent with the hypothesis that low economic growth provokes higher unemployment rates.

From table 1 it can be observed that for the years that we study about 47 percent of women participate in the labor market compared to about 81 percent of men. From 2008 to 2012 the labor force participation rate of women has been steady and remains substantially below that of men. Also, the distribution of the labor force by employment status is different for men

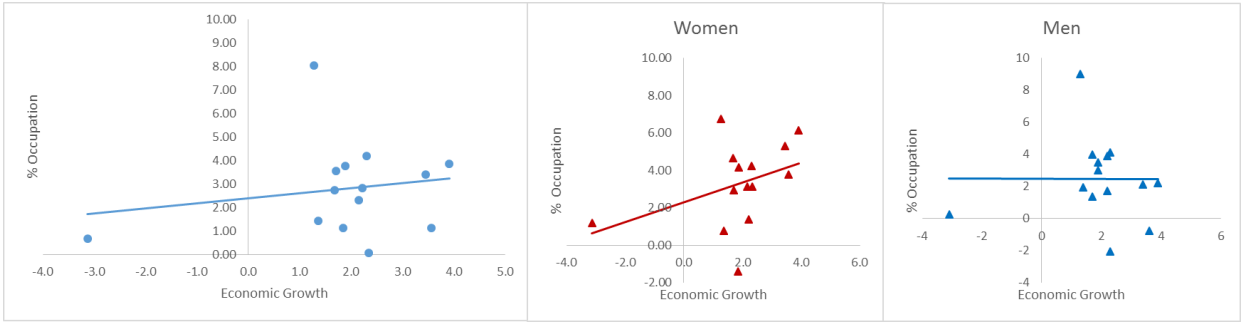
and women; 10 percent of women focus on paid domestic service, while almost no men belong to this status. Men are more likely than women to be permanent or temporary wage and salaried employees. On the other hand, self- employment is higher for women than men (Appendix, Table A3).

Table 1. Descriptive statistics in the Panel data and full EHPM samples (2008-2012)

	All observations		Women		Men	
	All	Panel Data	All	Panel Data	All	Panel Data
All observations	100.0	100.0	52.6	52.3	47.4	47.7
By Labour Market Concept						
Economically active population	62.8	62.2	47.4	46.7	81.2	80.4
Urban	65.6	65.2	67.0	66.5	64.0	63.5
Rural	34.4	34.9	33.1	33.5	36.0	36.5
Unemployed	6.6	6.6	4.5	4.5	8.1	8.0
By Education						
No Education	12.4	11.6	12.4	11.8	12.4	11.5
Incomplete primary	23.2	23.0	22.8	22.3	23.5	23.5
Complete primary	14.5	14.5	13.7	13.6	15.1	15.1
Incomplete secondary	18.8	19.2	16.6	17.2	20.4	20.6
Complete secondary	17.9	17.7	18.8	18.3	17.1	17.2
Somekind of higher level	13.3	14.0	15.8	16.8	11.5	12.1
By Sector						
Agriculture and mining	20.7	21.1	5.3	5.4	31.8	32.1
Manufacturing/Construction	16.2	16.9	11.1	12.3	19.9	20.2
Textile manufacturing	4.8	4.7	7.6	7.6	2.7	2.7
Commerce	28.5	27.7	41.5	41.6	19.1	18.0
High complexity services	18.2	18.7	16.2	16.8	19.6	20.0
Low complexity services	11.7	10.9	18.3	16.3	7.0	7.1
By Categories						
Formal salaried	16.3	16.2	12.3	11.5	21.1	21.7
Informal salaried	17.9	15.6	11.1	9.3	26.1	23.0
Advantageous self-employed not agriculture	5.8	6.2	4.9	5.0	6.9	7.6
Unfavorable self-employed not agriculture	9.5	10.3	12.9	14.1	5.5	5.8
Agricultural advantageous self-employed	1.5	1.9	0.2	0.2	3.1	3.8
Agriculture unfavorable self-employed	3.3	3.8	0.5	0.7	6.7	7.4
Paid domestic workers	4.2	4.0	3.5	3.4	5.2	4.7
Unemployed	4.1	4.2	2.1	2.2	6.5	6.5
Non-labor / studing	8.3	8.7	8.2	8.5	8.4	9.0
Non-labor force at domestic work	20.2	20.4	36.4	37.2	0.9	0.7
Non-labor force / others	8.7	8.8	8.0	7.8	9.5	9.9

Source: EHPM (2008-2012)

Figure 1 Occupation vs. Economic Growth – 1995-2013



Notes: 2007 data is not being used due to change in sampling frame.
See appendix A, table A2
Source: own elaboration with data from EHPM y BCR

The EHPM includes a direct question for the reasons of not seeking a paid job. As noted above, there are more women out of the labor force than men. 69 percent of women state that they are out of the labor force because of family obligations or unpaid domestic work responsibilities – 14.8 percent state that they are studying and 11.7 percent report disability or illness. In contrast, the main reason for men not seeking a job is because they are studying (40 percent, appendix A, Table A4).

The labor market dynamics of men and women are conditioned by the traditional division of labor by gender. For instance, the industry sectors where people are likely to work differ between men and women. Women have a higher participation in commerce, 42 percent vs. 18.8 percent for men in 2012; low complexity services[2] (18.6 percent vs. 7.6 percent for men); and textile manufacturing (6.9 percent vs. 2.5 percent for men). In the case of men, most work in the agriculture sector; (34.3 percent of men work in agriculture compared to 5.3 women in 2012), followed by manufacturing and construction (19.1 percent vs. 11.2 percent of women); and high complexity services (17.9 percent vs. 15.9 percent for women, Table 1).

Regarding education, women achieve higher education levels than men. For example, in 2012 20.1 percent of women had completed secondary education vs. only 18.5 percent of men; 15.7 percent of women had some kind on tertiary education vs. 11.9 percent of men (Table 1).

Figure 2 portrays an interesting insight about the income gap between men and women by education level for wage and salaried employees and the self-employed. At most educational levels, the income distribution of men is to the right of that for women, indicating that men earn more than women at these education levels. For employees, the gap between the earnings of men and women narrows with education, so that for wage and salaried employees

[2] Low complexity services include: communitarian, social and personal services, private domesticservices.
High complexity services include: utilities, transport, storage, telecommunications, financial services, public administration.

with a tertiary education the earning gap between men and women is almost zero. On the other hand, the earnings gap between self-employed men and self-employed women increases as education level increases.

As education increases individuals opt to enter into the service sector; data shows that 79.8 percent of women who belong to the service sector complete upper level education, meanwhile 44.2 percent of women working in the commerce section either have no education or incomplete primary level. In the case of men, the least educated remain in agriculture, and the most educated tend to be employed in the service sector (Appendix A, Table A7).

Another important fact to consider is that the percentage of workers in formal salaried jobs is similar for both men and women, 26 percent for both (see Table 2). However, due to the lower rate of job-market participation, women´s participation in formal jobs is also lower. According to data from the "Instituto Salvadoreño del Seguro Social" (ISSS), 41.8 percent of covered individuals are women and 58.2 percent are men (Appendix, Table A8).

Figure 2: Monthly earnings male-female gap between wage employees and self- employed workers by education level

Source: Data base of Multipurpose Household Survey (EHPM), DIGESTYC, 2008 – 2012.

3.2. Characteristics of men and women in each state

To study the movement into and out of advantageous labor market states in El Salvador we classified men and women into the following states: not in the labor force (divided between those in school, those engaged in unpaid domestic work, and others not in the labor force), unemployed, unpaid family work, employed in the salaried informal sector, employed in salaried formal sector, non-agricultural self- employed/employer, agricultural self-employed/employer. The last two states are also further divided into advantageous and unfavorable self-employment.

The category "salaried formal sector" includes employees who are benefiting from social security, either employed full time or part-time. All wage and salaried employees who are not benefiting from social security are classified as "informal".

The category "Advantageous Non-Agricultural Self-employed/Employer" includes self- employed workers who are not engaged in agriculture and whose labor earnings are greater than the legal minimum wage.[3] All self-employed workers and employers who are not engaged in agriculture and that do not meet the above conditions are classified as "Unfavorable Non Agricultural Self-employed/Employer".

The category "Advantageous Agricultural Self-employed/Employer" includes self- employed workers who are engaged in agriculture and whose labor earnings are greater than the legal minimum wage. All self-employed workers and employers who are engaged in agriculture and that do not meet the above conditions are classified as "Unfavorable Agricultural Self-employed/Employer".

The "Unpaid family worker" category includes any person who works without remuneration in a business, firm or family farm. The category "Unemployed" includes people who do not have a job but who are actively seeking one.

The category "Not in the Labor Force - Student" includes persons 16 years of age or older who are not part of the labor force and who report to be exclusively devoted to studying.

We distinguished between two further categories of non-students what are not in the labor force. The category "Not in the Labor Force – Unpaid Domestic Work" includes persons 16 years of age or older who are not part of the labor force who report to be exclusively devoted

[3] Multiple minimum wages are set by industry sector in El Salvador during different periods of time. Before May 2008 urban monthly minimum wage was $183 compared to rural minimum wage, $85.8. From May 2008 to December 2008, the urban minimum wage was $192.3 against $90 for the rural area. Finally from 2009 the minimum wage for the urban area was $207.9 and $97.2 for the rural area. For comparisons to results of a companion project in Nicaragua we also constructed a separate set of results that define advantageous" as having a household income per capita above the poverty line; the corresponding results which are presented and discussed in the appendix B, are similar for both definitions of "advantageous".

to domestic work. “Other inactive” are those who report to not be in the labor force for any other reason. This last category includes those who are retired and young people who are neither working nor in school (sometimes called “NENE”-Not Employed and Not in Education), and the disabled.

Table 2 shows the proportion of men and women in each of the eleven labor market states. Men are more likely to be salaried formal employees than women (21.2 percent vs. 12.3 percent). The same is true for informal sector employees where 26.1 percent are men vs. 11.1 percent females. Men are also more likely than women to be in advantageous non-agricultural self-employment (6.9 percent vs. 4.9 percent), while women are more likely to be in unfavorable non-agricultural self-employment (12.9 percent for women vs. 5.5 percent for men). Men are more likely to be agricultural self-employed (either advantageous or unfavorable). In total, men are more likely than women to be found in advantageous labor market states in El Salvador. Men are also more likely than women to be unpaid family employees or unemployed. Men and women are equally likely to be full-time students. Finally, women are more much likely to be engaged in unpaid domestic work (0.9 percent of men vs. 36.4 percent of women).

Table 2

Distribution of the working age population according to their labor market state, comparison by gender (2008-2012)

Sector	Total Working Age Population		Active in the workforce	
	Men	Women	Men	Women
Formal salaried	21.10%	12.30%	26.00%	25.90%
Informal salaried	26.10%	11.10%	32.10%	23.40%
Advantageous self-employed not agriculture	6.90%	4.90%	8.60%	10.30%
Unfavorable self-employed not agriculture	5.50%	12.90%	6.80%	27.20%
Agricultural advantageous self-employed	3.10%	0.20%	3.80%	0.40%
Agriculture unfavorable self-employed	6.70%	0.50%	8.30%	1.10%
Un-paid family work employee	5.20%	3.50%	6.40%	7.30%
Unemployed	6.50%	2.10%	8.10%	4.50%
Non-labor/students	8.40%	8.20%		
Non-labor force/unpaid domestic work	0.90%	36.40%		
Non-labor force/other reasons	9.50%	8.00%		

Source: EHPM 2008-2012

We examine the characteristics of men and women in each sector by estimating an equation where the probability that a man or women is found in status j can be captured using the multinomial logit technique:

$$P_{ij} = \exp(\Sigma_k B_{jk} X_{ik}) / \Sigma_j \exp(\Sigma_k B_{jk} X_{ik}) \qquad (1)$$

In this equation, P_{ij} is a multinomial variable that indicates if the individual i is found in status j. The X_{ik} is a vector of k personal and job characteristics. From the estimated coefficients, B_{jk}, we can calculate the marginal impact of each explanatory variable k on the probability of a being in each state, controlling other personal and job characteristics. Tables 3 and 4 present the estimates of the marginal impact of each explanatory variable k on the probability of being in each state, calculated from the multinomial logit coefficient estimates.

For both men and women, older workers are more likely to be in an employed state (both advantageous and unfavorable) compared to a non-employed state. That is, younger workers are more likely to be unpaid family workers, students, in unpaid domestic work, or not in the labor force.

For men and women, more education significantly increases the probability of formal salaried employment and advantageous non-agricultural self-employment. On the other hand, education does not increase the probability that either men or women are employed in advantageous agricultural self-employment (in fact it decreases the probability slightly).

Table 3.

Marginal effects on the probability of being in each labor market state, women

Variables	Formal (salaried)	Informal (salaried)	Advantegous NASE	Unfavorable NASE	Advantegous ASE	Unfavorable ASE	Unpaid Worker	Unemployed	NLF - Student	NLF - Domestic	Inactive
AGE	0.008 ***	0.009 ***	0.007 ***	0.017 ***	0.000 ***	0.000 ***	-0.002 ***	0.000	-0.001 ***	-0.034 ***	-0.004 ***
AGE_squared	0.000 ***	0.000 ***	0.000 ***	0.000 ***	0.000 ***	0.000 ***	0.000 ***	0.000 ***	0.000 ***	0.000 ***	0.000 ***
Education level	0.010 ***	0.001 ***	0.002 ***	-0.002 ***	0.000 ***	0.000 ***	0.002 ***	0.002 ***	0.000 ***	-0.016 ***	0.001 ***
Head of household	0.004 ***	-0.024 ***	0.053 ***	0.082 ***	0.002 ***	0.007 ***	-0.061 ***	-0.005 ***	-0.001 ***	-0.030 ***	-0.028 ***
Spouse	-0.017 ***	-0.113 ***	0.016 ***	0.020 ***	-0.001 ***	0.000	-0.022 ***	-0.018 ***	-0.002 ***	0.195 ***	-0.059 ***
High population density area	0.024 ***	0.031 ***	0.008 ***	0.017 ***	-0.001 ***	-0.003 ***	-0.002	0.006 ***	0.001 ***	-0.090 ***	0.010 ***
Age 6 or younger	-0.005 ***	-0.020 ***	-0.001	0.000	0.000	0.000 **	-0.007 ***	-0.003 ***	0.000 ***	0.042 ***	-0.008 ***
Age 7 to 18	-0.002 ***	0.004 ***	0.001 ***	-0.001	0.000 ***	0.001 ***	0.002 ***	0.000	0.000 ***	-0.003 ***	-0.002 ***
Age 19 to 65	0.002 ***	-0.002 **	0.000	-0.017 ***	0.000 **	-0.001 ***	-0.001 **	0.000	0.000 *	0.019 ***	0.001 **
Age 65+	-0.003 ***	-0.011 ***	0.001	0.000	0.000	0.000	-0.009 ***	-0.002 ***	0.000	0.019 ***	0.005 ***
Tubed w ater inside dw elling	0.030 ***	0.044 ***	0.020 ***	0.038 ***	-0.001 **	-0.003 ***	0.001	-0.004 **	0.000 ***	-0.122 ***	-0.004
Electricity	0.000	-0.048 ***	0.023 ***	0.016 ***	0.000	0.000	0.010 ***	-0.004 ***	0.000 ***	0.001	0.000
Water	0.007 ***	0.000	0.010 ***	0.001	0.000 **	-0.001 ***	0.005 ***	0.001 ***	0.000 ***	-0.023 ***	0.001
d09	-0.004 ***	-0.002	0.001	0.003	0.000	0.000	0.001	0.003 ***	0.000	0.003	-0.005 ***
d10	-0.005 ***	0.002	0.002	-0.008 *	0.000	0.001 **	0.000	0.005 ***	0.000	0.007	-0.004 **
d11	-0.007 ***	0.006 *	0.001	-0.005	0.000	0.002 ***	0.002	0.002 **	0.000	0.006	-0.007 ***
d12	-0.007 ***	0.011 ***	0.001	-0.004	0.000	0.001	0.003 *	0.002 *	0.000	0.000	-0.007 ***

Table 4.

Marginal effects on the probability of being in each labor market state, men

Variables	Formal (salaried)	Informal (salaried)	Advantegous NASE	Unfavorable NASE	Advantegous ASE	Unfavorable ASE	Unpaid Worker	Unemployed	NLF - Student	NLF - Domestic	Inactive
AGE	0.019 ***	-0.011 ***	0.008 ***	0.004 ***	0.001 ***	0.000	-0.007 ***	-0.007 ***	0.000 ***	-0.001 ***	-0.005 ***
AGE_squared	0.000 ***	0.000 ***	0.000 ***	0.000 ***	0.000 ***	0.000 ***	0.000 ***	0.000 ***	0.000 ***	0.000 ***	0.000 ***
Education level	0.025 ***	-0.016 ***	0.005 ***	0.001 ***	-0.003 ***	-0.011 ***	-0.001 ***	0.001 *	0.000 ***	0.000	-0.001 ***
Head of household	0.087 ***	0.028 ***	0.058 ***	0.008 ***	0.034 ***	0.044 ***	-0.100 ***	-0.042 ***	0.000 ***	-0.010 ***	-0.106 ***
Spouse	0.077 ***	-0.003	0.048 ***	-0.002	0.007 **	0.018 ***	-0.024 ***	-0.055 ***	0.000 ***	-0.007 ***	-0.059 ***
High population density area	0.084 ***	-0.034 ***	0.014 ***	0.022 ***	-0.030 ***	-0.067 ***	-0.021 ***	0.015 ***	0.000 ***	0.001	0.015 ***
Age 6 or younger	0.005 ***	0.010 ***	0.004 ***	0.001	0.002 ***	0.005 ***	-0.006 ***	-0.010 ***	0.000 ***	-0.002 ***	-0.011 ***
Age 7 to 18	-0.003 ***	0.002 **	0.000	-0.008 ***	0.004 ***	0.005 ***	0.005 ***	0.000	0.000 ***	-0.001 *	-0.004 ***
Age 19 to 65	0.015 ***	-0.014 ***	-0.002 ***	-0.009 ***	0.001 ***	0.000	0.005 ***	0.004 ***	0.000 ***	0.000	0.000
Age 65+	-0.010 ***	-0.011 ***	0.002	-0.007 ***	0.002 ***	0.010 ***	0.006 ***	0.004 **	0.000 *	0.000	0.004 ***
Tubed w ater inside dw elling	0.078 ***	-0.031 ***	0.029 ***	0.017 ***	-0.014 ***	-0.053 ***	-0.028 ***	-0.001	0.000 ***	0.000	0.005
Electricity	0.014 ***	-0.098 ***	0.030 ***	0.007 ***	0.011 ***	0.001	0.007 ***	0.001	0.000 ***	0.002 **	0.026 ***
Water	0.020 ***	-0.045 ***	0.013 ***	0.006 ***	-0.003 ***	-0.006 ***	-0.002	0.007 ***	0.000 ***	0.002 *	0.008 ***
d09	-0.013 ***	-0.032 ***	0.002	0.001	0.002	0.007 ***	0.004 ***	0.025 ***	0.000 **	0.002 *	0.001
d10	-0.016 ***	-0.002	0.002	0.003	0.001	0.002	0.002	0.007 *	0.000 ***	0.003 *	-0.001
d11	-0.015 ***	-0.004	0.004 **	-0.001	0.005 ***	0.006 **	0.006 ***	0.003	0.000 *	-0.001	-0.002
d12	-0.018 ***	0.018 ***	0.001	-0.005 **	0.005 ***	0.009 ***	0.007 ***	-0.006 *	0.000 *	-0.003 ***	-0.007 ***

For both men and women, household heads are more likely to be in an advantageous labor market state (salaried formal employee and advantageous self-employed--both agricultural and non-agricultural).

Female spouses are less likely to be in salaried formal employees, while male spouses are more likely to be in salaried formal employment. The difference between men and women spouses is likely a consequence of the traditional expectation that wives will provide unpaid domestic care to children and other dependents, while husbands are expected to have full-time jobs outside of the home. Both male and female spouses are also more likely to be in advantageous non-agricultural and agricultural self-employment. Wives may be more likely to be found in self-employment than in salaried formal employment because self-employment can provide flexibility in terms of hours worked that allows women to provide domestic care and obtain a salary in the labor market. Our qualitative analysis suggests that the main disadvantage of formal sector work for women is the inflexibility in terms of number of hours worked and when work is possible. The women interviewed in the qualitative analysis suggest that the informal sector is more flexible in terms of hours or work, location, and other factors.

A higher number of dependent members in the household (i.e. too young or too old to work) make it less likely that women are found in the salaried formal sector. This is not true for other advantageous labor market states. That is, a higher number of dependent members in the household (i.e. too young or too old to work) is not significantly correlated with a smaller probability that women are found in advantageous self- employment. Again, this may be because part-time work and non-standard work hours in the salaried formal sector are not common, making it difficult for women to provide unpaid domestic care and work full-time in the formal salaried sector.

The negative impact of more dependent household members on participation in the salaried formal sector is clear for women but not for men. For men, an increase in the number of children in the household six years old and younger increases the probability that he is found in the salaried formal sector, while an increase in the number of children ages 7-18 or age 65 and older decreases the probability of being found in the salaried formal sector. Having more young children in the household also increases the probability that men are found in other advantageous labor market states. This may reflect social pressure for fathers to financially support children (and no pressure for fathers to provide unpaid domestic care). For both men and women, having more working age (19-64) household members increases the probability of being in the salaried formal sector.

For both men and women, access to public services (tubed water, electricity and water) increases the probability that a person is found in the salaried formal sector and advantageous non-agricultural self-employment.

We include two explanatory variables that measure the impact of income from other sources than own work; remittances and non-labor income ("non-labor" includes income from capital, land and the earnings of other family members). For both men and women, receiving a higher level of remittances and other non-labor income decreases the probability of being a formal or informal sector employee. Quantitatively, the negative impact of remittances on the probability of formal sector employment is larger for women than men. For men, receiving more remittances increases the probability of being in advantageous self- employment (both non-agricultural and agricultural) and decreases the probability of being in unfavorable non-agricultural self-employment. For both men and women a higher level of non-labor income increases the probability of being in advantageous non- agricultural self-employment and decreases the probability of being in unfavorable self- employment. However, for women receiving more remittances decreases the probability of being in advantageous non-agricultural self-employment. For both men and women, receiving a higher level of remittances or other non-labor income increases the probability that a person is not in the labor force (either a student, in unpaid domestic work or other inactive). Taken all together, the evidence from El Salvador suggests that remittances and other non-labor income reduce labor force participation but promote advantageous self-employment (and reduce the probability of being in unfavorable self-employment). This is true for both men and women.

The negative impact of remittances and other non-labor income on employment in the formal and informal sectors is larger for women than men. It may be that women are more likely to leave formal and informal employment for unpaid domestic care when non-labor income increases because women are primarily responsible for the care of children and other unpaid domestic responsibilities. Consistent with this hypothesis, remittances and other labor income have a bigger positive impact on the probability that men will be found in advantageous non-agricultural self-employment. To simplify, our evidence suggests that an increase in remittances and other non-labor income "allows" workers to avoid or leave formal or informal employment, with men instead becoming advantageous self-employed workers and women becoming full-time unpaid domestic care providers.

4. Probabilities of transition

The major focus of this study is on the factors that influence women and men to work and the places where they do, and in particular on what factors influence whether women dynamically transition into advantageous labor market states. Using panel data we calculate the probabilities of finding a person i in status j at time t+k, conditional on being in status z at time t:

$$P_{izj} = Pr(S_{i,t+k} = j \mid Si_t = z) \qquad (2)$$

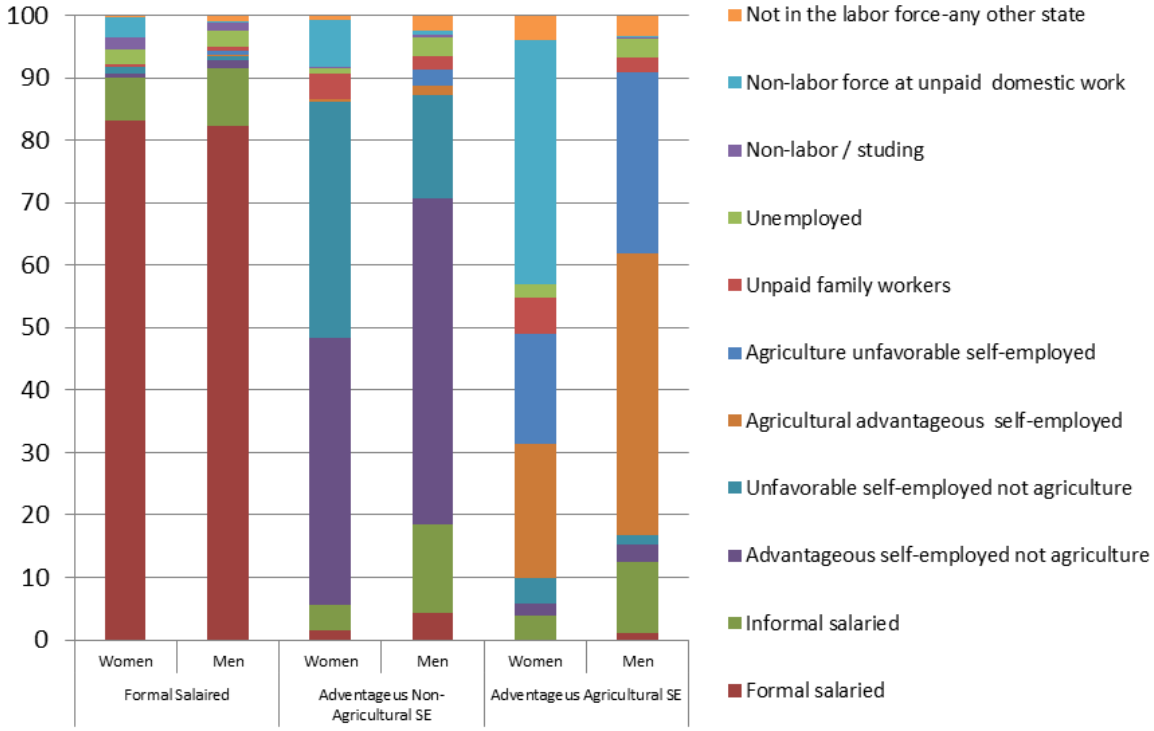
where S_{it} = the labor market state of individual *i* in time t.

We estimated matrices of probabilities of transitions into and out of the 11 labor market and non-labor market states defined earlier. These 11 X 11 matrices were estimated separately for men and women. The results are shown in Figure 3, Table 5 and Table 6, where the rows represent the origin or the state in the previous period, and the columns represent the destination status on the next period. The numbers presented in the main diagonal show the number of people who did not move from any category (had no mobility); numbers off the diagonal show the amount transitioned to the indicated state.

4.1. *Women*

Quantitatively, the most mobility among women is mobility to and from unpaid domestic work; with 31 percent of women in unpaid domestic work in one year in a different state the next year, and 30 percent of those in unpaid domestic work in one year who were not in unpaid domestic work the year before. As noted below, there is very little mobility of men to and from unpaid domestic work. This is an important difference between the labor market mobility of men and women, and suggests that there policies that provide skills to women currently in unpaid domestic work may be effective and efficient. There is also substantial mobility of women to and from unfavorable non-agricultural self-employment and informal salaried employment.

Fig. 3: The origin of workers found in advantageous labor market states



Women move into the three categories considered to be "advantageous" labor market categories at smaller rates than do men; in our data 22.7 percent of men move into an advantageous labor market state each year, while only 12 percent of women do. This suggests that women do not fully participating in the benefits of economic growth in El Salvador.

The results in table 5 and figure 3 also indicate that women who work in formal salaried employment have a high probability, 85.4 percent, of remaining in this category. Of those women who enter formal salaried employment, most come from informal salaried employment or from unpaid domestic work (see figure 3). Of those women who leave the salaried formal sector most go to the informal sector.

There is much less stability in non-agricultural advantageous self-employment than there is in salaried formal employment. Fewer than 50% of women who are in advantageous non-agricultural self-employment in one year are also found in that sector in the next year. Men are significantly more likely to remain in advantageous non- agricultural self-employment from one year to the next compared to women. Of those women who transition into advantageous non-agricultural self-employment, most come from unfavorable non-agricultural self-employment (see Figure 3). Unpaid domestic work is the next largest source of women who transition into advantageous non- agricultural self-employment. Of women who transition out of advantageous non- agricultural self-employment, most go into unfavorable non-agricultural self- employment or into unpaid domestic work.

Very few women transition into advantageous agricultural self-employment. This state is dominated by men.

Most women do not remain unemployed for long; 85% of women who are unemployed in one year are not unemployed the next. Unemployed women are most likely to leave the labor force and become unpaid domestic workers or informal sector employees.

4.2. Men

Overall, men exhibit higher mobility than women. As with women, the most significant mobility among men is into and out of informal salaried employment, with 24.1 percent of men in that sector in one year leaving it the next year, and 25 percent of those found in that sector in one year coming from a different sector the year before. As with women, the least mobile men are salaried formal employees; 83 percent of male salaried formal employees remained in that sector from one year to the next.

Table 5

Probabilities of transition matrix for women (Sum of transitions for the period 2009-2012)

Status	1	2	3	4	5	6	7	8	9	10	11	Total in t	Total in t - Diagonal	% Mobility
1-Formal salaried employment	1976	112	18	39	0	0	12	34	11	93	18	2313	337	3.6
	85.4	4.8	0.8	1.7	0.0	0.0	0.5	1.5	0.5	4.0	0.8	100.0		
	83.1	4.6	1.5	1.0	0.0	0.0	1.3	6.3	0.7	0.9	0.9	9.0		
2-Informal salaried employment	166	1192	49	243	2	10	40	75	40	434	41	2292	1100	11.8
	7.2	52.0	2.1	10.6	0.1	0.4	1.7	3.3	1.7	18.9	1.8	100.0		
	7.0	48.6	4.1	6.5	3.9	3.8	4.5	13.8	2.6	4.1	2.1	9.0		
3. Advantageous self-employed not agriculture	14	52	507	383	1	2	46	7	3	69	14	1098	591	6.3
	1.3	4.7	46.2	34.9	0.1	0.2	4.2	0.6	0.3	6.3	1.3	100.0		
	0.6	2.1	42.7	10.2	2.0	0.8	5.2	1.3	0.2	0.7	0.7	4.3		
4. Unfavorable self-employed not agriculture	28	264	449	1913	2	25	76	23	15	826	89	3710	1797	19.3
	0.8	7.1	12.1	51.6	0.1	0.7	2.0	0.6	0.4	22.3	2.4	100.0		
	1.2	10.8	37.8	51.0	3.9	9.6	8.5	4.2	1.0	7.8	4.6	14.5		
5. Agricultural advantageous self-employed	0	1	4	9	11	12	2	0	0	28	3	70	59	0.6
	0.0	1.4	5.7	12.9	15.7	17.1	2.9	0.0	0.0	40.0	4.3	100.0		
	0.0	0.0	0.3	0.2	21.6	4.6	0.2	0.0	0.0	0.3	0.2	0.3		
6. Agriculture unfavorable self-employed	0	10	2	26	9	68	6	5	1	110	12	249	181	1.9
	0.0	4.0	0.8	10.4	3.6	27.3	2.4	2.0	0.4	44.2	4.8	100.0		
	0.0	0.4	0.2	0.7	17.6	26.2	0.7	0.9	0.1	1.0	0.6	1.0		
7-Unpaid family workers	10	58	48	85	3	3	322	14	78	253	17	891	569	6.1
	1.1	6.5	5.4	9.5	0.3	0.3	36.1	1.6	8.8	28.4	1.9	100.0		
	0.4	2.4	4.0	2.3	5.9	1.2	36.2	2.6	5.0	2.4	0.9	3.5		
8-Unemployed	54	90	9	35	1	2	20	76	29	151	10	477	401	4.3
	11.3	18.9	1.9	7.3	0.2	0.4	4.2	15.9	6.1	31.7	2.1	100.0		
	2.3	3.7	0.8	0.9	2.0	0.8	2.2	14.0	1.9	1.4	0.5	1.9		
9. Non-labor / studing	47	124	4	35	0	3	92	107	1263	236	33	1944	681	7.3
	2.4	6.4	0.2	1.8	0.0	0.2	4.7	5.5	65.0	12.1	1.7	100.0		
	2.0	5.1	0.3	0.9	0.0	1.2	10.3	19.7	81.3	2.2	1.7	7.6		
10. Non-labor force at domestic work	75	503	89	913	20	124	259	191	95	7847	607	10723	2876	30.8
	0.7	4.7	0.8	8.5	0.2	1.2	2.4	1.8	0.9	73.2	5.7	100.0		
	3.2	20.5	7.5	24.3	39.2	47.7	29.1	35.1	6.1	74.1	31.7	41.9		
11-Not in the labor force-any other state	9	46	8	72	2	11	15	12	19	544	1072	1810	738	7.9
	0.5	2.5	0.4	4.0	0.1	0.6	0.8	0.7	1.0	30.1	59.2	100.0		
	0.4	1.9	0.7	1.9	3.9	4.2	1.7	2.2	1.2	5.1	55.9	7.1		
Total in T+1	2379	2452	1187	3753	51	260	890	544	1554	10591	1916	25577	9330	100.0
	9.3	9.6	4.6	14.7	0.2	1.0	3.5	2.1	6.1	41.4	7.5	100.0		
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		**36.5**
Total in T+ 1 - Diagonal	403	1260	680	1840	40	192	568	468	291	2744	844	9330		
% Mobility	4.3	13.5	7.3	19.7	0.4	2.1	6.1	5.0	3.1	29.4	9.0			

Source: For each stata, the first row show the number of observation un each transition, the second row should the probabilities that in status j at time t+k conditional on being in status Z at time t, the third row shows the probabilities that an individual in status j at time t+k was in status z a time t.

When men do leave formal sector employment, they are most likely to transition into informal sector employment or unemployment. Unlike for women, very few men leave formal sector employment each year to enter unpaid domestic work. Of those men who enter formal salaried employment, most come from informal salaried employment (see Figure 3). Unlike women, very few men enter salaried formal employment from unpaid domestic work

Table 6

Probabilities of transition matrix for men (Sum of transitions for the period 2009-2012)

STATUS	1	2	3	4	5	6	7	8	9	10	11	Total in t	Total in t - Diagonal	% Mobility
1-Formal salaried employment	3349	327	63	38	12	37	20	123	16	5	41	4031	682	7.5
	83.1	8.1	1.6	0.9	0.3	0.9	0.5	3.1	0.4	0.1	1.0	100.0		
	82.2	5.8	4.2	3.2	1.1	1.7	1.8	8.7	1.3	3.7	1.9	18.6		
2-Informal salaried employment	379	3340	213	213	126	406	202	406	68	24	142	5519	2179	24.1
	6.9	60.5	3.9	3.9	2.3	7.4	3.7	7.4	1.2	0.4	2.6	100.0		
	9.3	59.5	14.2	17.9	11.3	18.6	17.8	28.9	5.3	17.9	6.7	25.4		
3. Advantageous self-employed not agriculture	51	172	782	242	33	38	23	33	2	8	36	1420	638	7.1
	3.6	12.1	55.1	17.0	2.3	2.7	1.6	2.3	0.1	0.6	2.5	100.0		
	1.3	3.1	52.2	20.3	3.0	1.7	2.0	2.3	0.2	6.0	1.7	6.5		
4. Unfavorable self-employed not agriculture	33	197	250	431	16	61	32	53	8	11	76	1168	737	8.1
	2.8	16.9	21.4	36.9	1.4	5.2	2.7	4.5	0.7	0.9	6.5	100.0		
	0.8	3.5	16.7	36.2	1.4	2.8	2.8	3.8	0.6	8.2	3.6	5.4		
5. Agricultural advantageous self-employed	9	140	23	26	502	294	21	48	1	2	41	1107	605	6.7
	0.8	12.6	2.1	2.3	45.3	26.6	1.9	4.3	0.1	0.2	3.7	100.0		
	0.2	2.5	1.5	2.2	45.0	13.5	1.8	3.4	0.1	1.5	1.9	5.1		
6. Agriculture unfavorable self-employed	21	413	36	51	325	1009	52	95	5	5	146	2158	1149	12.7
	1.0	19.1	1.7	2.4	15.1	46.8	2.4	4.4	0.2	0.2	6.8	100.0		
	0.5	7.4	2.4	4.3	29.1	46.3	4.6	6.8	0.4	3.7	6.9	9.9		
7-Unpaid family workers	24	250	33	19	27	63	531	58	111	10	43	1169	638	7.1
	2.1	21.4	2.8	1.6	2.3	5.4	45.4	5.0	9.5	0.9	3.7	100.0		
	0.6	4.5	2.2	1.6	2.4	2.9	46.7	4.1	8.7	7.5	2.0	5.4		
8-Unemployed	109	429	46	74	32	124	66	347	31	24	113	1395	1048	11.6
	7.8	30.8	3.3	5.3	2.3	8.9	4.7	24.9	2.2	1.7	8.1	100.0		
	2.7	7.6	3.1	6.2	2.9	5.7	5.8	24.7	2.4	17.9	5.4	6.4		
9. Non-labor / studing	51	165	7	20	3	14	141	116	1006	10	58	1591	585	6.5
	3.2	10.4	0.4	1.3	0.2	0.9	8.9	7.3	63.2	0.6	3.6	100.0		
	1.3	2.9	0.5	1.7	0.3	0.6	12.4	8.3	78.9	7.5	2.8	7.3		
10. Non-labor force at domestic work	6	29	8	9	3	7	15	30	4	8	38	157	149	1.6
	3.8	18.5	5.1	5.7	1.9	4.5	9.6	19.1	2.5	5.1	24.2	100.0		
	0.1	0.5	0.5	0.8	0.3	0.3	1.3	2.1	0.3	6.0	1.8	0.7		
11-Not in the labor force-any other state	42	148	37	69	36	124	34	97	23	27	1375	2012	637	7.0
	2.1	7.4	1.8	3.4	1.8	6.2	1.7	4.8	1.1	1.3	68.3	100.0		
	1.0	2.6	2.5	5.8	3.2	5.7	3.0	6.9	1.8	20.1	65.2	9.3		
Total in T+1	4074	5610	1498	1192	1115	2177	1137	1406	1275	134	2109	21727	9047	100.0
	18.8	25.8	6.9	5.5	5.1	10.0	5.2	6.5	5.9	0.6	9.7	100.0		
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		**41.6**
Total in T+ 1 - Diagonal	725	2270	716	761	613	1168	606	1059	269	126	734	9047		
% Mobility	8.0	25.1	7.9	8.4	6.8	12.9	6.7	11.7	3.0	1.4	8.1			

Source: For each stata, the first row show the number of observation un each transition, the second row should the probabilities that in status j at time t+k conditional on being in status Z at time t, the third row shows the probabilities that an individual in status j at time t+k was in status z a time t.

Men who transition into advantageous non-agricultural employment are most likely to come from informal employment or unfavorable non-agricultural employment, and not from formal sector employment (see Figure 3). Unlike women, men are not likely to transition into non-agricultural self-employment from unpaid domestic work.

Compared to other advantageous labor market states there is less stability in advantageous agricultural self-employment. Table 6 shows that there is a lot of year-to- year movement between advantageous and unfavorable agricultural self-employment. Almost 30% of advantageous agricultural self-employed men were unfavorable agricultural self-employed

the year before, and over 26% of men in advantageous agricultural self-employment this year will be in unfavorable agricultural self- employment next year. This likely reflects the volatility of agricultural prices and therefore of earnings from agricultural self-employment.

In contrast with women, men tend to remain longer as unemployed, 24.9 percent of unemployed men in one year are still unemployed in the next year. Of the men who transition out of unemployment, most go into informal salaried employment. Unlike for women, very few men transition from unemployment into unpaid domestic work or into any other non-labor market state.

5. Determinants of the transitions into and out of a successful state

According to the literature, variables that measure human capital, family characteristics and the characteristics of the job are important determinants of labor market transitions.

Those with more human capital (i.e. education and experience) are more likely to be in the labor force, and if they work are more likely to be full-time formal sector employees (Duryea, Marqéz, Pagés and Sarpetta, 2006; Bosch and Maloney, 2010; Cunningham and Bustos-Salvagno, 2011). Workers with more experience (especially in the formal sector) are more likely to be successful entrepreneurs (Cunningham and Bustos-Salvagno, 2011). Some studies suggest that human capital is a more important factor in explaining the success in the case of women entrepreneurs compared to men (Bardasi, Sabarwal and Terrell, 2010). Age is also important in determining whether or where a person works. For example, younger workers are more likely to be informal sector workers while owners/employers are more likely to be older (Bosch and Maloney, 2010).

It has been argued that the reasons for becoming self-employed are different for men and women; specifically it has been argued that women become self-employed because they seek more flexible work schedules (Delman and Davidson, 2000). To examine this possibility, other explanatory variables will include some that describe the structure of the family, including the number of infant children and marital status.

It has been found that the selection of economic activity differs between men and women entrepreneurs. Women entrepreneurs are predominantly concentrated in service activities, while men tend to be owners of companies engaged in manufacturing and construction activities (Bardasi, Sabarwal and Terrell, 2010). It has also been shown that in developing economies, women are less likely to operate in high-technology activities (Anna, et al. 1999). To examine the role of the selection of economic activity as a determinant of advancement, the regressions will include economic activity dummies as explanatory variables.

Next, we will examine the determinants of the transitions into and out of each advantageous state by estimating probit models.

5.1. Entering an advantageous state

Using a sample of workers in unfavorable states in time t, we estimate a probit equation of the form:

$$Prob(INADVANT_{it} = 1) = \alpha_o + X'_{it}\beta + \Sigma_{t=1}^{T} \gamma_t YR_t + \mu_{it}, \qquad (3)$$

In equation (3), $INADVANT_{it}$ equals one if the individual is in unfavorable state at time t but is in an advantageous state at time t+1, and zero if the individual *i* is in an unfavorable state at time t and stays in a unfavorable state at time t+1.

Xit is the explanatory variables vector which includes; individual specific human capital variables (years of education and whether the individual had received job training), whether the individual lives in a high population density area, the relationship to the household head, change in the marital status, industry sector, household characteristics (number of young children, number of school age children, number of working age household members, number of household members older than 65 years of age), whether the individual has access to public services (tube water and electricity).

Explanatory variables also include the amount of remittances and "non-labor income" (equal to household income minus remittances and minus the labor earnings of individual i). We expect that because of substitution of leisure for labor, a higher non-labor income will reduce the probability that a worker is in the labor force. At the same time, a higher non-labor income may make it more likely that a worker is a successful self-employed worker because non-labor income may provide a source of financing for capital. We separate remittances from other non-labor income to examine whether these two sources of non-labor income have different impacts on the labor market choices of men and women. Finally, to control for year-specific factors such as aggregate supply and aggregate demand changes or design changes in the household surveys, we include a dummy variable for each year, *YRt*. From the estimated coefficients, β_{it}, we can calculate the marginal impact of each explanatory variable on the probability of a transition from a not advantageous state to each advantageous labor market state.

Our estimates of these effects are reported on table 7; positive number indicates that an increase in the corresponding explanatory variable increases the probability of transition from an unfavorable state to each advantageous state indicated by the column of the table.

5.1.a. Characteristics of those who transition from unfavorable states into advantageous non-agricultural self-employment

- *Older*: For both men and women, the probability that someone moves up from an unfavorable state to advantageous non-agricultural self-employed increases with age, but at a decreasing rate. The probability of transitioning into advantageous non-agricultural self-employment increases until men and women are about 48 years old. After 48 years old, the probability of this transition decreases with age.
- *More Education*: For both men and women, a secondary education increases the probability that someone moves up from an unfavorable state to advantageous non-agricultural self-employed. For women, a completed primary education also helps. On the other hand, obtaining additional tertiary (university) education does not increase the probability of moving up into advantageous non- agricultural self-employment beyond the benefit of a secondary education.
- *Household heads:* are more likely to transition into advantageous non- agricultural self-employment; this is true for both men and women. Being a spouse of the household head also increases the likelihood of a transition into non-agricultural self-employment. This is also true for both men and women.
- *Access to electricity*: access to electricity increases the probability that both men and women transition from an unfavorable state to advantageous non- agricultural self-employed. Access to water or living in a high-density population area are not significant determinants of transitioning into advantageous non- agricultural self-employment.
- *Sector of employment*: For both men and women, those who transition into advantageous non-agricultural self-employment work in the industry sectors of manufacturing and construction, commerce, and high complexity services. The magnitude of the impacts of sector of employment are similar for men and women except in high complexity services. The results presented in table 8 imply that advantageous self-employed men are more likely than women to come from high complexity services. This is consistent with Anna, et al. (1999), who presents evidence that in developing economies, entrepreneurial women are less likely to operate in high-technology activities.

  Remittances and non-labor income: Higher non-labor income and remittances increases the probability of a transition into advantageous non-agricultural self-employment (although only the coefficient on non-labor income is statistically significant). These results suggests that, in El Salvador, access to non-labor income to finance capital for self-employment makes it more likely that for someone will become an advantageous self-employed/employer.

Table 7.

Marginal effects on the probability of entering an advantageous state, comparison by gender

Variable	Salaried formal sector		Advantageous non-agricultural SE		Advantageous agricultural SE	
	Men	Women	Men	Women	Men	Women
Log Likelihood	-2405.811	-1546.937	-2095.508	-2304.597	-2152.891	-248.047
Number of obs.	15,282	22,187	15,282	22,187	15,282	22,187
Pseudo R2	0.122	0.210	0.202	0.222	0.113	0.134
AGE	0.00324 ***	0.00032 **	0.00354 ***	0.00213 ***	0.00247 ***	0.00009 **
	-0.00045	*-0.00016*	*-0.00035*	*-0.00023*	*-0.00038*	*-0.00004*
AGE_squared	-0.00004 ***	-0.00001 ***	-0.00004 ***	-0.00002 ***	-0.00003 ***	0.00000 *
	(5.17e-06)	(1.87e-06)	(3.80e-06)	(2.54e-06)	(3.82e-06)	(4.07e-07)
Primary completed	0.01870 ***	0.00515 **	0.00440	0.00608 ***	-0.00708 ***	-0.00049 **
	(0.00500)	(0.00208)	(0.00273)	(0.00207)	(0.00243)	(0.000235)
Some secondary completed	0.03080 ***	0.00680 ***	0.00724 **	0.00443 **	-0.01430 ***	-0.00042 *
	(0.00520)	(0.00208)	(0.00292)	(0.00203)	(0.00250)	(0.000249)
Secondary completed	0.07300 ***	0.02990 ***	0.02650 ***	0.00667 **	-0.01350 ***	-0.000258
	(0.0103)	(0.00570)	(0.00585)	(0.00263)	(0.00284)	(0.000263)
Higher level studies	0.09330 ***	0.03680 ***	0.02070 ***	0.01960 ***	-0.01880 ***	n.i.
	(0.0148)	(0.00819)	(0.00753)	(0.00614)	(0.00279)	
Head of household	0.00194	0.000222	0.01770 ***	0.01620 ***	0.02520 ***	0.00132
	(0.00383)	(0.00132)	(0.00303)	(0.00381)	(0.00381)	(0.00114)
Spouse	0.00410	-0.00207 **	0.02750 **	0.01090 ***	0.02210 *	0.000388
	(0.00862)	(0.000995)	(0.0114)	(0.00229)	(0.0124)	(0.000502)
Towards married status	0.00387	0.000107	0.0148	0.000190	0.00218	n.i.
	(0.00813)	(0.00269)	(0.00966)	(0.00461)	(0.00999)	
Towards single status	-0.00483	0.00349	0.01890 *	0.00986 *	-0.01430 ***	0.00471
	(0.00871)	(0.00332)	(0.0109)	(0.00532)	(0.00485)	(0.00314)
High population density area	0.02280 ***	0.00833 ***	0.00143	0.000525	-0.02220 ***	n.i.
	(0.00443)	(0.00175)	(0.00237)	(0.00142)	(0.00208)	
Manufacturing & construction	0.00487	0.00662 **	0.05150 ***	0.07770 ***	n.i.	n.i.
	(0.00377)	(0.00314)	(0.00630)	(0.0102)		
Commerce	0.01840 ***	0.00334 **	0.06470 ***	0.08700 ***	n.i.	n.i.
	(0.00512)	(0.00135)	(0.00783)	(0.00606)		
Textile & clothing industry	0.0208	0.02060 ***	0.0328	0.03680 ***	n.i.	n.i.
	(0.0179)	(0.00719)	(0.0207)	(0.0105)		
High complexity services	0.03520 ***	0.01040 ***	0.04860 ***	0.01780 ***	n.i.	n.i.
	(0.00965)	(0.00299)	(0.0104)	(0.00475)		
Low complexity services	0.00477 ***	0.00276 ***	0.00577 ***	0.00330 ***	n.i.	n.i.
	(0.000818)	(0.000471)	(0.000636)	(0.000809)		
Age 6 or younger	0.00119	-0.000623	0.00137	0.00180 ***	0.00200	5.51e-05
	(0.00154)	(0.000449)	(0.00113)	(0.000696)	(0.00132)	(0.000117)
Age 07_18	-0.000128	-0.00060 **	-0.00189 ***	0.000127	0.00262 ***	4.56e-05
	(0.000815)	(0.000269)	(0.000639)	(0.000393)	(0.000709)	(5.96e-05)
Age 19_65	0.00302 ***	0.000220	-0.00164 *	-0.00088 *	0.00114	-0.000125
	(0.00106)	(0.000313)	(0.000851)	(0.000528)	(0.000970)	(9.53e-05)
Age 65+	-0.00165	-0.000744	-0.00679 ***	8.91e-05	0.00345	-0.000230
	(0.00252)	(0.000729)	(0.00216)	(0.00125)	(0.00224)	(0.000237)
Tubed water inside dwelling	0.02050 ***	0.00245	0.00556	0.000888	-0.01250 **	-0.000324
	(0.00313)	(0.00159)	(0.00377)	(0.00304)	(0.00536)	(0.000489)
Electricity	-0.00394	-0.000621	0.00980 ***	0.00677 ***	0.00546 **	-0.000362
	(0.00332)	(0.00112)	(0.00182)	(0.00120)	(0.00233)	(0.000334)
Water	0.00168	0.000754	0.00259	0.00142	-0.00504 *	-8.77e-06
	(0.00280)	(0.000854)	(0.00200)	(0.00131)	(0.00266)	(0.000202)
Remittances	-0.02340 *	0.000619	0.00960	0.00591	0.04420 ***	0.000316
	(0.0125)	(0.00198)	(0.00895)	(0.00390)	(0.00878)	(0.000577)
Non labor income	-0.00593 *	0.000114	0.00951 ***	0.00343 ***	-0.00122	6.74e-05
	(0.00343)	(0.000716)	(0.00205)	(0.00121)	(0.00406)	(0.000301)
d09	-0.00405	6.21e-05	3.67e-05	0.00403 **	-0.000758	-8.55e-05
	(0.00312)	(0.000972)	(0.00255)	(0.00198)	(0.00330)	(0.000270)
d10	-0.00222	2.51e-05	0.00280	0.00373 **	0.00430	0.000516
	(0.00312)	(0.000957)	(0.00259)	(0.00188)	(0.00342)	(0.000438)
d11	-0.00523 *	0.000454	0.00295	0.00847 ***	0.00341	9.42e-05
	(0.00300)	(0.000967)	(0.00260)	(0.00216)	(0.00341)	(0.000301)
d12	d.c.	d.c.	d.c.	d.c.	d.c.	d.c.

Notes: Table reports marginal effects evaluated at the means of all variables, from estimates of β in Eq. (3) using probit regressions for samples identified by column. A positive coefficient means that an increase in the related variable, increases the probability that a person enters a particular successful state.

n.i./Not included in this model; d.c/Dropped because of collinearity

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

- *Dependent family members:* Surprisingly, table 8 presents no evidence that an increase in the number of dependent family members reduces the probability that women become advantageous self-employed workers or employers. On the other hand, there is some evidence that an increase in the number of children 7-18 years and the number of household members 65 years and older does significantly reduce the probability that men transition into advantageous self- employment. This pattern may exist because women with dependent family members are attracted by the flexibility of self-employment, which can allow women to provide child care and other unpaid domestic care while still earning an income. Consistent with this, an increase in the number of children between 7 and 19 years old reduces the probability that women transition into formal sector salaried employment, where there is little flexibility in terms of hours worked. On the other hand, men in El Salvador are generally not expected to provide unpaid domestic care, but are expected to financially support the family.

5.1.b. **Characteristics of those who transition from unfavorable states into salaried formal employment:**

- *Older*: For both men and women, age increases the probability of transitioning into salaried formal employment (although at a decreasing rate with age). The probability of transitioning into salaried formal employment increases with age until the late 30s for men and the 20s for women. After that, the probability of transitioning into salaried formal employment decreases with age.
- *More education*: For both men and women, more education increases the probability of transitioning into salaried formal employment. The probability of transitioning into salaried formal employment increases for each additional education level. The magnitude of the coefficients on the education variables are all higher for men than for women, suggesting that education is a more important determinant promoting the transition into salaried formal employment for men than women. This may be because educated women suffer a "penalty" compared to men when searching for formal sector employment.
- *Fewer school age children in households*: For women, a larger number of household members between 7 and 19 years old reduces the probability of transitioning into salaried formal employment. As noted, this may reflect the inflexibility of hours worked in salaried formal employment. Aside from this one variable, the number of dependents in the household does not affect the probability of transitioning into salaried formal employment.
- *Remittances and other non-labor income*: For men, but not women, remittances and other non-labor income decreases the probability of transitioning into formal salaried employment.
- *Sector of Employment*: Both men and women who transition into salaried

formal employment are very likely to have worked in high complexity services (compared to agriculture, manufacturing and construction, commerce and low complexity services). Women, but not men, who transition into salaried formal employment are also more likely to have come from textile and clothing manufacture (possibly because the large export and *maquila* sector in El Salvador disproportionately employs women).

5.1.c. **Characteristics of those who transition from unsuccessful states into advantageous agricultural self-employment:**

- *Older*: For both men and women, the probability that someone moves up from an unsuccessful state to successful agricultural self-employed increases with age, but at a decreasing rate .*Fewer school-age children: For men only, an increase in the number of school- age children makes the transition into successful agricultural self-employment less likely. The number of dependent household members has no significant impact on the probability that women transition into this sector*
- *Receiving remittances:* increases the probability that men transition into advantageous agricultural self-employment.
- Unlike transitions into other advantageous states, education does not promote the transition into advantageous agricultural self-employment.

5.2 Leaving an advantageous state

Using a sample of workers in advantageous states in time t, we estimate a probit equation of the form:

$$Prob(OUTADVANT_{it} = 1) = \alpha_o + X'_{it}\beta + \sum_{t=1}^{T} \gamma_t YR_t + \mu_{it}, \quad (4)$$

In equation 4, $OUTADVANT_{it}$ equals one if the individual *i* is in an advantageous state at time t but is not in an advantageous state at time t+1, and zero if the individual *i* is in an advantageous state at time t and stays in advantageous state at time t+1. X_{it} *is* the explanatory variables vector which includes the same variables as equation 1. Also, to control for year-specific factors such as aggregate supply and aggregate demand changes or design changes in the household surveys, we include a dummy variable for each year, YR_t. From the estimated coefficients, β_{it}, we can calculate the marginal impact of each explanatory variable on the probability of a transition from each advantageous state to a not advantageous labor state. Our estimates of these effects are reported on table 8.

A positive number in table 8 indicates that an increase in the corresponding explanatory variable, increases the probability of transition from the advantageous states indicated in each column of the table to a not advantageous state

5.2.a. **Characteristics of those who transition out of advantageous non-agricultural self-employment into an unfavorable state:**

- *Younger workers*: especially the youngest workers are more likely to fall out of advantageous non-agricultural self-employment.
- *Less Education*: for both men and women, having at least a secondary complete education reduces the probability of transitioning out of advantageous non-agricultural self-employment.
- *More school-age children*: for men, but not for women, an increase in the number of young children (0-6 years old) makes it more likely to transition out of advantageous non-agricultural self-employment. Surprisingly, the number of children or elderly members of the household does not affect whether or not a women transitions out of advantageous non-agricultural self-employment.
- *Secondary family workers*: Being a household head reduces the probability that an advantageous non-agricultural self-employed worker will move out of that state, although this is statistically significant only for men.
- Non-labor income: For both men and women, more non-labor income decreases the probability that a worker transitions out of advantageous non-agricultural self-employment. This suggests that non-labor income can help to finance the capital necessary to maintain advantageous non-agricultural self-employment.

5.2.b. **Characteristics of those who transition out of salaried formal employment into an unfavorable state:**

- *Younger workers*: especially the youngest workers are more likely to fall out of salaried formal employment.
- *Less Education*: for both men and women a tertiary education reduces the probability of a transition out of salaried formal employment. For men, but not women, having a secondary education also significantly reduces the probability of transitioning out of salaried formal employment.
- *Household Head*: Being a household head reduces the probability that male salaried formal employee will move out of that sector. This variable is not significant for women.
- *Remittances and other non-labor income*: For men, but not women, remittances and other non-labor income increases the probability of transitioning out of formal salaried employment. This suggests that higher remittances induce men to substitute leisure for salaried formal employment.
- *Sector of Employment*: For both men and women, workers in low complexity services and the textile and clothing industries are less likely to leave salaried formal employment than are workers in agriculture.

Table 8

Marginal effects on the probability of leaving an advantageous state, comparison by gender

Variable	Salaried formal sector		Advantageous non-agricultural SE		Advantageous agricultural SE	
	Men	Women	Men	Women	Men	Women
Log Likelihood	-1548.915	-827.803	-845.788	-718.058	-708.093	-16.152
Number of obs.	3,956	2,295	1,336	1,083	1,075	66
Pseudo R2	0.087	0.105	0.067	0.041	0.047	0.457
AGE	-0.01670 ***	-0.02490 ***	-0.03290 ***	-0.02070 **	-0.01320 *	-0.0113
	(0.00299)	*(0.00415)*	*(0.00792)*	*(0.00887)*	*(0.00694)*	*(0.0167)*
AGE_squared	0.00020 ***	0.00027 ***	0.00038 ***	0.00020 **	0.00012 *	0.000105
	(3.54e-05)	(5.19e-05)	(8.52e-05)	(9.20e-05)	(7.00e-05)	(0.000159)
Primary completed	0.0261	0.0442	0.00181	-0.0387	-0.0793	0.0152
	(0.0219)	(0.0408)	(0.0418)	(0.0453)	(0.0506)	(0.0275)
Some secondary completed	-0.0222	-0.0153	-0.0444	-0.0674	-0.11000 *	n.i.
	(0.0172)	(0.0287)	(0.0390)	(0.0456)	(0.0590)	
Secondary completed	-0.06430 ***	-0.0380	-0.09120 **	-0.13000 **	-0.141	n.i.
	(0.0161)	(0.0276)	(0.0430)	(0.0542)	(0.0947)	
Higher level studies	-0.08120 ***	-0.06690 **	-0.18700 ***	-0.0896	-0.237	d.c.
	(0.0163)	(0.0301)	(0.0452)	(0.0750)	(0.158)	
Head of household	-0.11900 ***	0.0324	-0.21700 ****	-0.14300 **	-0.16000 **	0.0150
	(0.0239)	(0.0279)	(0.0673)	(0.0687)	(0.0721)	(0.0833)
Spouse	-0.0342	0.0280	-0.25300 ***	-0.0265	-0.131	n.i.
	(0.0283)	(0.0216)	(0.0686)	(0.0648)	(0.128)	
Tow ards married status	-0.00114	0.0158	-0.0831	0.0246	-0.0825	n.i.
	(0.0409)	(0.0443)	(0.125)	(0.135)	(0.133)	
Tow ards single status	0.11400 *	0.0681	0.0365	-0.22600 **	0.124	n.i.
	(0.0619)	(0.0557)	(0.104)	(0.0946)	(0.159)	
High population density area	-0.02870 **	-0.03450 **	0.0160	-0.00186	0.121	n.i.
	(0.0118)	(0.0142)	(0.0344)	(0.0390)	(0.106)	
Manufacturing & construction	-0.0234	-0.06890 **	-0.00530	-0.27900 ***	n.i.	n.i.
	(0.0282)	(0.0351)	(0.0660)	(0.102)		
Commerce	-0.0185	-0.0486	-0.11300 *	-0.26500 ***	n.i.	n.i.
	(0.0291)	(0.0435)	(0.0635)	(0.0935)		
Textile & clothing industry	-0.07580 ***	-0.09470 ***	-0.0791	d.c.	n.i.	n.i.
	(0.0216)	(0.0317)	(0.119)			
High complexity services	-0.0391	0.0217	d.c.	-0.191	n.i.	n.i.
	(0.0270)	(0.0648)		(0.125)		
Low complexity services	-0.02170 ***	-0.03080 ***	-0.02370 *	-0.05880 **	n.i.	n.i.
	(0.00599)	(0.0111)	(0.0139)	(0.0284)		
Age 6 or younger	-0.00261	-0.00257	-0.04570 **	-0.00336	-0.0139	-0.00778
	(0.00778)	(0.00988)	(0.0219)	(0.0230)	(0.0194)	(0.0209)
Age 07_18	0.00828 *	0.00459	-0.00958	-0.0190	0.00647	-0.0228
	(0.00452)	(0.00612)	(0.0119)	(0.0131)	(0.00996)	(0.0247)
Age 19_65	-0.01350 **	-0.00671	0.02710 *	0.0162	0.00709	0.0481
	(0.00592)	(0.00698)	(0.0156)	(0.0166)	(0.0147)	(0.0454)
Age 65+	-0.00168	0.0239	-0.0127	-0.00566	0.0327	0.0387
	(0.0142)	(0.0150)	(0.0386)	(0.0387)	(0.0355)	(0.0451)
Tubed w ater inside dw elling	-0.18800 **	d.c.	-0.0684	0.28400 *	-0.09950 *	-0.0255
	(0.0834)		(0.142)	(0.146)	(0.0538)	(0.0356)
Electricity	-0.03990 **	-0.0237	-0.15600 ***	-0.14300 **	-0.0419	0.359
	(0.0195)	(0.0304)	(0.0575)	(0.0636)	(0.0430)	(0.285)
Water	-0.00313	-0.00995	-0.09900 **	-0.0523	0.06240 *	-0.0441
	(0.0163)	(0.0247)	(0.0421)	(0.0463)	(0.0354)	(0.0492)
Remittances	0.0954	0.0125	-0.00372	-0.00821	0.0572	0.0463
	(0.0828)	(0.0724)	(0.190)	(0.130)	(0.134)	(0.142)
Non labor income	0.03310 ***	0.02800 **	-0.05660 *	-0.06380 *	-0.20900 ***	0.0375
	(0.0122)	(0.0123)	(0.0310)	(0.0342)	(0.0457)	(0.0487)
d09	-0.03740 **	0.00500	-0.0249	0.0504	0.0220	n.i.
	(0.0146)	(0.0198)	(0.0418)	(0.0484)	(0.0529)	
d10	-0.02870 **	-0.0295	-0.000813	0.0716	0.0234	-0.280
	(0.0145)	(0.0183)	(0.0419)	(0.0458)	(0.0527)	(0.242)
d11	-0.04530 ***	-0.0122	0.0404	0.09260 **	-0.0119	-0.57700 **
	(0.0141)	(0.0188)	(0.0415)	(0.0462)	(0.0517)	(0.264)
d12	d.c.	d.c.	d.c.	d.c.	d.c.	d.c.

Notes: Table reports marginal effects evaluated at the means of all variables, from estimates of β in Eq. (4) using probit regressions for samples identified by column. A positive coefficient means that an increase in the related variable, increases the probability that a person enters a particular successful state.

n.i./Not included in this model; d.c/Dropped because of colinearity

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

6. Conclusions and Policy Implications

Our work sheds light on the answers to two key questions: (1) what are the characteristics of the men and women who move up to an advantageous labor market state from an unfavorable one? and (2) what are the characteristics of the men and women who fall out of advantageous labor market states into unfavorable ones? The answers to these questions can contribute to the appropriate design and targeting of public policies interventions to promote success in the labor market. Our work also sheds light on whether the characteristics correlated with success in the labor market differ between women and men, and therefore whether the appropriate design and targeting of policies is different for men and women

6.1 Summary of results

In general, in El Salvador men are more mobile than are women, over 22% of men change states from one year to the next, compared to only 12% of women. There is substantial mobility of both men and women ***into and out of*** advantageous non- agricultural self-employment. The fact that it is possible to transition from a non-advantageous labor market state into advantageous non-agricultural self-employment shows that there is a role for policies that promote the ability of workers in non-advantageous states to transition into advantageous non-agricultural self- employment.

On the other hand, there is very little mobility out of or into salaried formal sector employment; 85% of women and 83% of men stay in this sector from one year to the next. However, there is an important number of women who move from formal salaried to unpaid domestic work.

What did the advantageous non-agricultural self-employed do before they became successful? For men, those who transition into advantageous non-agricultural self- employment tend to come from unfavorable non-agricultural self-employment and from informal salaried employment. For women, those who transition into advantageous non-agricultural self-employment tend to come from unpaid domestic work as well as from unfavorable non-agricultural self-employment and informal salaried employment. Advantageous non-agricultural self-employed do not generally come from the salaried formal sector.

What did formal sector salaried employees do before they became successful? Of the small number of people who transition into formal salaried employment, most come from informal salaried employment. For women there is also a flow from unpaid domestic care.

For both men and women, the most important characteristic promoting transitions into the two non-agricultural advantageous labor market states sector is education. Any additional education will increase the probability of transitioning into the salaried formal sector, although

tertiary education is the most advantageous for the salaried formal sector while a secondary education is most advantageous for advantageous non-agricultural self-employment. Our results suggest that, compared to women, education has a bigger impact on the ability of men to transition into advantageous labor market states. This suggests that educated women may face a "penalty" in searching for advantageous employment.

Both men and women who transition into formal salaried employment are likely to have worked in high complexity services. It is likely that education is necessary for employment in high complexity services, and that this is another indication of the importance of formal education in obtain advantageous employment. Women, but not men, who transition into formal salaried employment are also likely to come from textile and clothing manufacture, possibly because the large export sector in El Salvador disproportionately hires women. Those who transition into advantageous non-agricultural self-employment are also likely to work in the industry sectors of manufacturing and construction, commerce and high complexity services. This is true for both women and men, although men are more likely than women to come from high complexity services

Very young workers are not likely to transition into advantageous non-agricultural self-employment. It is most likely that a worker transitions into advantageous self-employment in their 30s or 40s. This suggests that workers who transition into advantageous self-employment obtain experience before becoming successful as self-employed.

Remittances and other non-labor income promote advantageous non- agricultural self-employment. Receiving more remittances and other non-labor income increases the probability of transitioning into advantageous non-agricultural self- employment and decreases the probability of transitioning out of this advantageous state. This is true for both men and women. For men, receiving more remittances and other non-labor income decreases the probability of transitioning into formal sector employment. In general, our results suggest that receiving more remittances decreases the probability of transitioning into formal sector employment but increases the probability of transitioning into advantageous self-employment. For women, an increase in remittances and other non-labor income also increases the probability of leaving the labor force for unpaid domestic care or other types of non-labor activity.

Access to electricity and other public services increases the probability that both men and women transition from an unfavorable state into advantageous non-agricultural self-employment.

Female spouses are less likely to be in salaried formal employees, while male spouses are more likely to be in salaried formal employment. A higher number of dependent members in the household (i.e. too young or too old to work) make it less likely that women (but not men) are found in the salaried formal sector. A higher number of dependent children (7-19 years old) also reduce the probability that women (but not men) transition into formal

salaried employment. The difference between men and women is likely a consequence of the traditional expectation that wives will provide unpaid domestic care to children and other dependents, while husbands are expected to have full-time jobs outside of the home. Surprisingly, the number of dependent family members does not have a significant influence on the probability that women will transition into advantageous non- agricultural self-employment. This may be because women are attracted to self-employment for the flexibility it offers.

6.2 Policy implications of the results

This paper informs the debate on the question: What public policies would best support the ability of women and men to become successful formal sector employees or successful small-scale entrepreneurs? Our results suggest that these policies include the following:

1. The most advantageous labor market state is formal sector salaried employment. Those in this state are the highest paid, have pensions and have access to Social Security medical care. Most people enter this sector soon after graduating from school and remain in this sector for a long time; very few older workers transition from non-advantageous labor market states into formal salaried employment. Our results suggest that skills (i.e. formal education and job training) are the most important factor promoting salaried formal employment. A post-secondary education is particularly useful for obtaining formal salaried employment. Tertiary education substantially increases the probability of a transition into salaried formal employment and significantly reduces the probability of transitioning out of salaried formal employment.

2. Education is also important in promoting success for both men and women in other labor market states (at least those outside of agriculture). For advantageous non-agricultural self-employment, a secondary education is most important; a secondary education (but not a tertiary education) significantly increases the probability of a successful transition into advantageous non- agricultural self-employment. There should be clear efforts to reduce the school drop-out rates, especially among girls, and to promote high-school completion through alternative programs for those already outside the school system.

The focus of any policy to increase education levels will be on the young. Our results suggest that it is not likely that older people who are in informal salaried employment, self-employed or are in unpaid family care will transition into formal salaried employment, even if they obtain more education. This suggests that most progress towards expanding “advantageous” employment, especially formal salaried employment, will be intergenerational. That is, those currently self-employed will not become formal sector employees, but their children may. We know that education is the key to obtaining formal sector employment. This is especially true for girls, who need to obtain education before they have children or get married. Once they are

married or have children, it becomes very difficult to complete education or to obtain advantageous employment.

Adults, especially the currently self-employed, do receive short-term benefits from educating children. For example, educated children can provide financial support for self-employment or in non-labor market states. This suggests that a policy of promoting the education of children can also be thought of as a policy of promoting the welfare of their parents (who might be currently self-employed), not only as a policy of promoting the welfare of the children. This suggests that allocating public funds to educating children, and especially to making sure that girls stay in school, may be the most effective use of public funds if the goal is to expand the number of adults in "advantageous" labor market states. For example, a policy promoting the education of poor children may be more effective than policies to "entrepreneurship" skills to adults. This also suggests that it is counterproductive to promote "entrepreneurship" training to children in primary or secondary schools, especially if these programs encourage children to leave school early in order to start their own businesses (which are not likely to succeed). In order to expand advantageous employment, it is more important to keep children in school (especially to obtain some post-secondary education) than to train them to leave school to start their own businesses.

3. Education does not matter in agricultural self-employment. That is, it does not promote advantageous agricultural self-employment. However, education children in rural areas will make it more likely that these children find better employment as formal salaried employees or non-agricultural self-employment.

4. There is substantial year-to-year movement up from less successful labor market states into advantageous non-agricultural self-employment. The fact that it is possible to transition from a non-advantageous labor market state into advantageous non-agricultural self-employment suggests that there is a role for policies that promote the ability of workers in non-advantageous states to transition into advantageous non-agricultural self- employment.

Below we discuss some policies suggested by our results:

6. Both men and women are more likely to transition into advantageous non-agricultural self-employment when they are older and have more working experience. Our results suggest that older workers are most likely transition into advantageous self-employment; young workers are not likely to transition into advantageous self-employment. Our results suggest that policies to promote advantageous self- employment should be targeted towards older workers who already have some relevant work experience.

7. While a tertiary education is an important prerequisite for success as a salaried formal employee and secondary education is an important prerequisite for advantageous non-agricultural self-employed/employer, our results suggest that policy interventions targeted to

current students that are designed to promote advantageous self-employment are not likely to be effective. Very few students move directly from school to self-employment, and younger workers are not likely to be advantageous self- employed workers. Our results suggest that programs designed specifically to teach the skills needed to be successful entrepreneurs are better targeted to older workers currently working as informal sector employees, non-advantageous self-employed workers or as unpaid family workers.

7. For both men and women, policies to promote advantageous non-agricultural self-employment/employer should target those currently working as informal sector employees or unfavorable non-agricultural self-employed and not salaried formal sector employees.

8. For women, there is also scope for policy intervention to promote the transition from unpaid domestic work (not in the labor force) into advantageous self-employment. This suggests the policy interventions should target women who are currently not in the labor force who are engaged in unpaid domestic work. For example, providing quality childcare services, and expanding access to initial and preschool education.

9. Since only around 30 percent of workers in El Salvador have a formal salaried work, and that 85 percent of women and 83 percent of men stay in this state from one year to the next, this implies that to allow more individuals to move to this advantageous state, new jobs need to be created. Therefore, policies to promote higher economic growth rates need to be implemented; this is particularly important for women.

10. Providing access to public services (electricity, and education) promotes the transition into successful non-agricultural self-employment/employer and salaried formal employment. This is true for both men and women.

11. Our results suggest that remittances and other non-labor income can be a source of financing that promotes advantageous self- employment. Those with access to remittances and other non-labor income have a higher probability of transitioning from unfavorable states into advantageous self- employment. Similarly, access to remittances and other non-labor income make it less likely that advantageous self-employed leave this advantageous labor market state and fall into an unfavorable state. These results suggest that policies that increase access to capital for those who do not have access to remittances or non-labor income could help to promote advantageous self-employment.

References

Allen, I. Elaine, et al. *Global Entrepreneurship Monitor: 2007 Report on Women and Entrepreneurship*, Babson Park, MA: The Center for Women's Leadership at Babson

College, 2007.

Bardasi, Elena, Shwetlena Sabarwal and Katherine Terrell, 2010, "How do Female Entrepreneurs Perform? Evidence from Three Developing Regions," World Bank mimeo, December.

Bennett, John and Saul Estrin (2007) "Entrepreneurial Entry in Developing Economies: Modeling Interactions Between the Formal and Informal Sector," working paper, London School of Economics

Bosch, Mariano and William Maloney, 2010, "Comparative Analysis of Labor Market Dynamics Using Markov Processes: An Application to Informality," Labour Economics, 17(4), 621-631.

Cunningham, Wendy and Javier Bustos Salvagno, "Youth Employment Transitions in Latin America," World Bank Policy Research Working Paper 5521, January 2011.

Decreto No. 645, Ley de Igualdad, Equidad y Erradicación de la Discriminación contra las Mujeres. Diario Oficial No. 70, El Salvador, 2011.

Delmar, F. and P. Davidson (2000), Where do they come from? Prevalence and characteristics of nascent entrepreneurs, *Entrepreneurship and regional development* 12, 1-23.

de Mel, Suresh, David McKenzie and Christopher Woodruff (2010), "Who are the Microenterprise Owners? Evidence from Sri Lanka on Tokman v. de Soto," in *International Differences in Entrepreneurship*, Lerner and Schoar, eds, University of Chicago Press.

De Soto, Hernan, 1989, *The Other Path: The Economic Answer to Terrorism*, Basic Books, New York.

Duryea, Suzanne, Gustavo Marquez, Carmen Pages and Stefano Scarpetta, 2006, "For Better or Worse? Job and Earnings Mobility in Nine Middle- and Low-Income Countries," in Susan M. Collins and Carol Graham, *Brookings Trade Forum 2006: Global Labor Markets?*, Brookings Institution Press, Washington, 1878-209.

Fields, Gary S., 1975, "Rural-Urban Migration, Urban Unemployment and Underemployment, and Job Search Activities in LDC's*," Journal of Development Economics*, Vol. 2, pp. 165-88.

Ghai, Dharam. 2003. "Decent work: Concept and indicators," *International Labour Review* 142 (2), 113-145.

Gobierno de El Salvador, *Plan quinquenal de desarrollo 2010-2014*, Segunda edición, El Salvador, 2011

Hundley, G. 2001. Why women earn less than men in self-employment. *Journal of Labor Research* 22, 817-829.

Instituto Salvadoreño para el Desarrollo de la Mujer (ISDEMU), 2011. *"Política nacional de las mujeres: actualizada: medidas al 2014 Instituto Salvadoreño para el Desarrollo de la Mujer (ISDEMU)*, 1ª edición, San Salvador, El Salvador, 2011.

Klapper, Leora and Simon Parker, 2010, "Gender and the Business Environment for New Firm Creation," *The World Bank Research Observer* (advance access February 25, 2010 at http://wbro.oxfordjournals.org/content/early/2010/02/25/wbro.lkp032.short).

Ley No. 648, Ley de Igualdad de Derechos y Oportunidades. Gaceta Diario Oficial No. 51, Nicaragua, 2008.

Lohmann, H., and S. Luber, 2004. "Trends in Self-Employment in Germany: Different Types, Different Outcomes?" In W. Muller and R. Arum ed. *The Reemergence of Self-Employment.* Princeton University Press: Princeton, New Jersey, 36-74.

OECD (2011) Women's economic empowerment. Issues paper Paris: OECD-DAC GENDERNET

Pagés, C., Piras, C. "El Dividendo de Género. Cómo Capitalizar el Trabajo de las Mujeres". Banco Interamericano de Desarrollo, 2010.

Tokman, Victor, 2007, "Modernizing the Informal Sector," UN/DESA Working Paper No. 42.

World Bank (2012) "The effect of Women´s Economic Power in Latin America and The Caribbean", Document of the World Bank, August 2012.

APPENDIX A. **Tables**